

**In the Claims**

Claims 1-9 (cancelled)

10. (original) A PNA chip comprising a solid carrier and a plurality of PNA fragments fixed onto the solid carrier at each one end, wherein a plurality of short chain spacer molecules having a hydrophilic moiety at each one end are fixed at each another end onto a surface area of the solid carrier having no PNA fragments thereon.
11. (original) The PNA chip of claim 10, wherein the solid carrier is an electro-conductive substrate.
12. (original) The PNA chip of claim 10, wherein the DNA fragments are fixed onto the solid carrier in an amount of  $10^{-20}$  to  $10^{-12}$  mo./mm<sub>2</sub>.
13. (original) The PNA chip of claim 10, wherein the hydrophilic moiety of the spacer molecule is a hydroxyl group.
14. (original) The PNA chip of claim 10, wherein the spacer molecule is fixed onto the solid carrier through a mercapto moiety attached to the end of the spacer molecule.
15. (original) The PNA chip of claim 10, wherein the spacer molecule is derived from a compound selected from the group consisting of 2-mercaptopethanol, 3-mercaptopethanol, 6-mercaptopethanol, and N,N'-di(3-hydroxy-n-propyl)-imidazole-2-thione.
16. (original) A process for preparing a PNA chip of claim 10 which comprises the steps of:
  - applying onto a solid carrier an aqueous solution of a plurality of PNA fragments dissolved or dispersed in an aqueous medium to fix the PNA fragments onto the solid carrier; and

applying onto the solid carrier having thereon the fixed PNA fragments an aqueous solution of short chain spacer molecules having at each one end a hydrophilic moiety and at each another end a moiety reactive to fix to the solid carrier.

Claims 17-18 (cancelled)